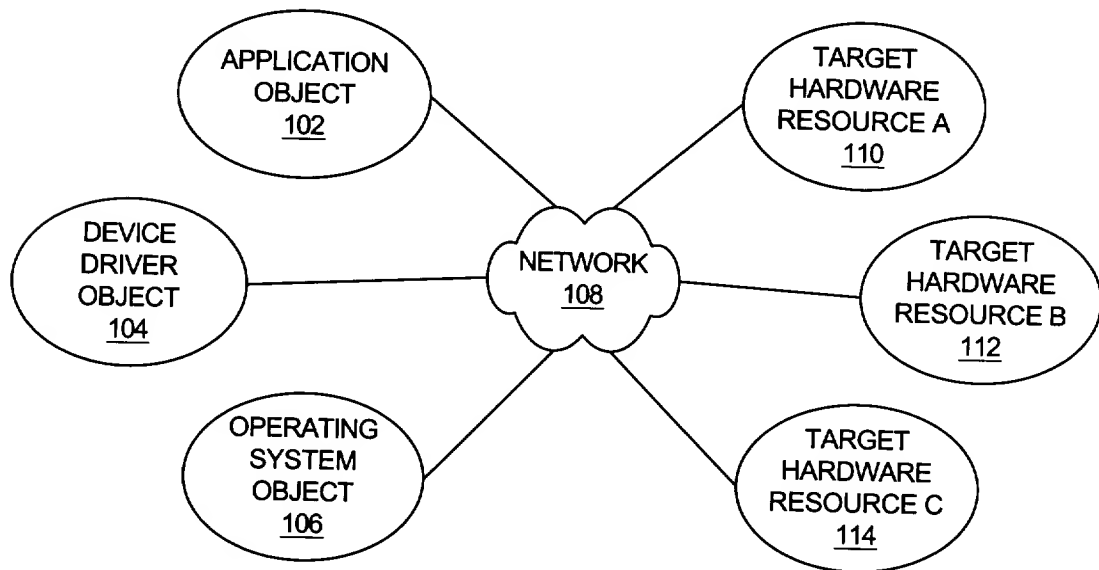
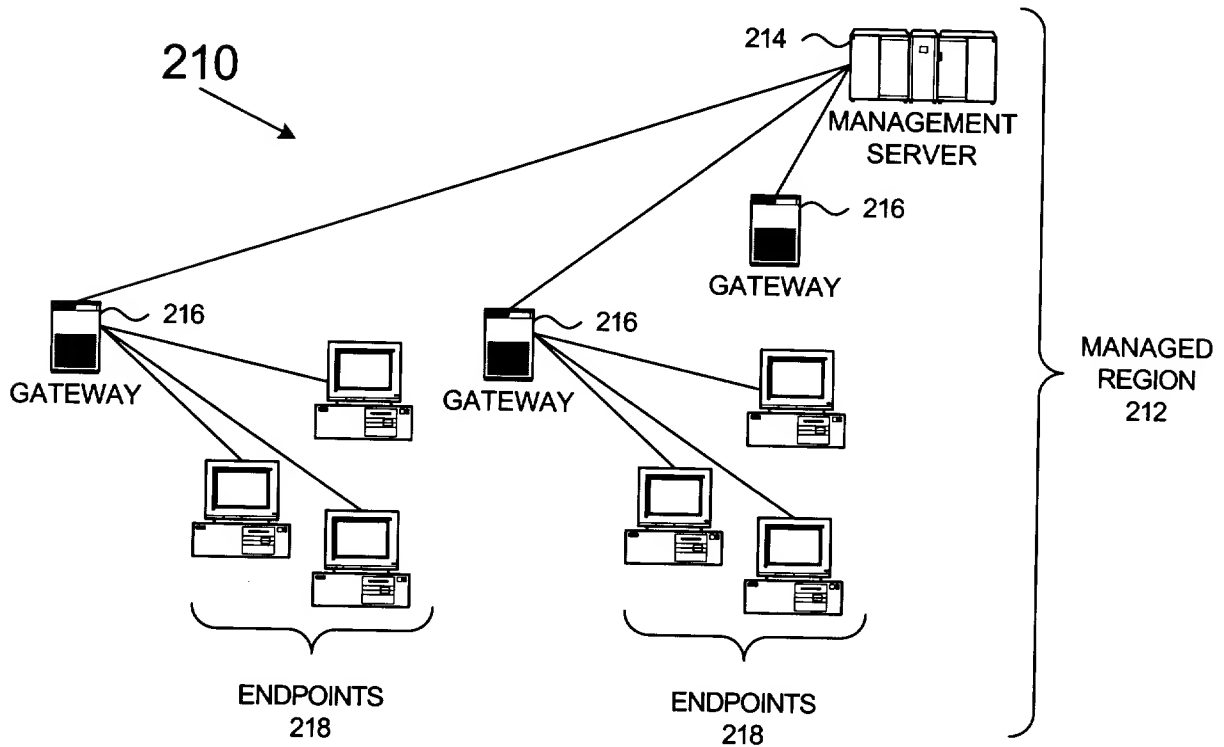


Method and system for management of logical networks for multiple customers within a network management framework

1/21



**FIG. 1**  
(PRIOR ART)



**FIG. 2A**

Method and system for management of logical networks for multiple customers within a network management framework

2/21

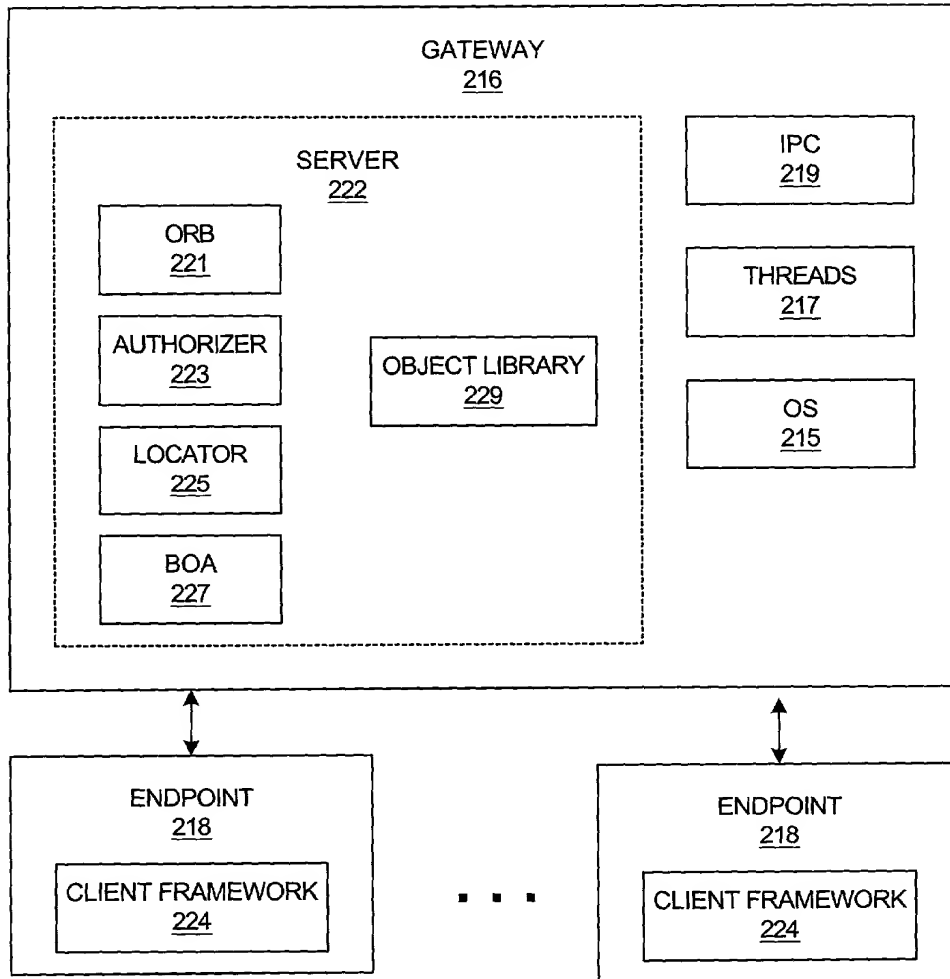


FIG. 2B

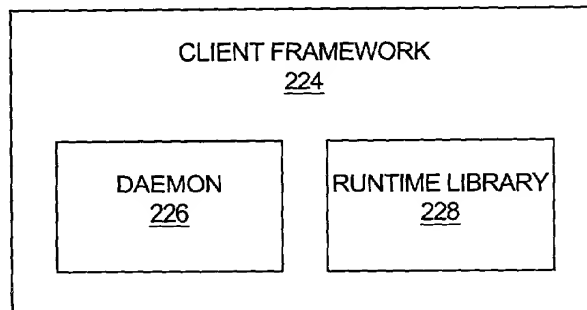


FIG. 2C

Method and system for management of logical networks for multiple customers within a network management framework

3/21

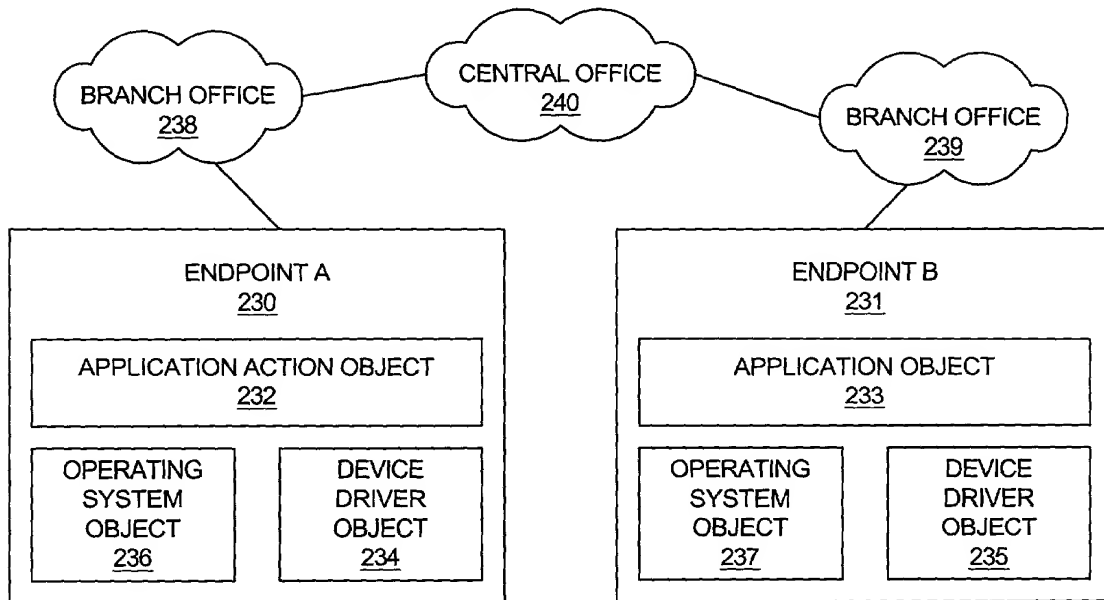


FIG. 2D

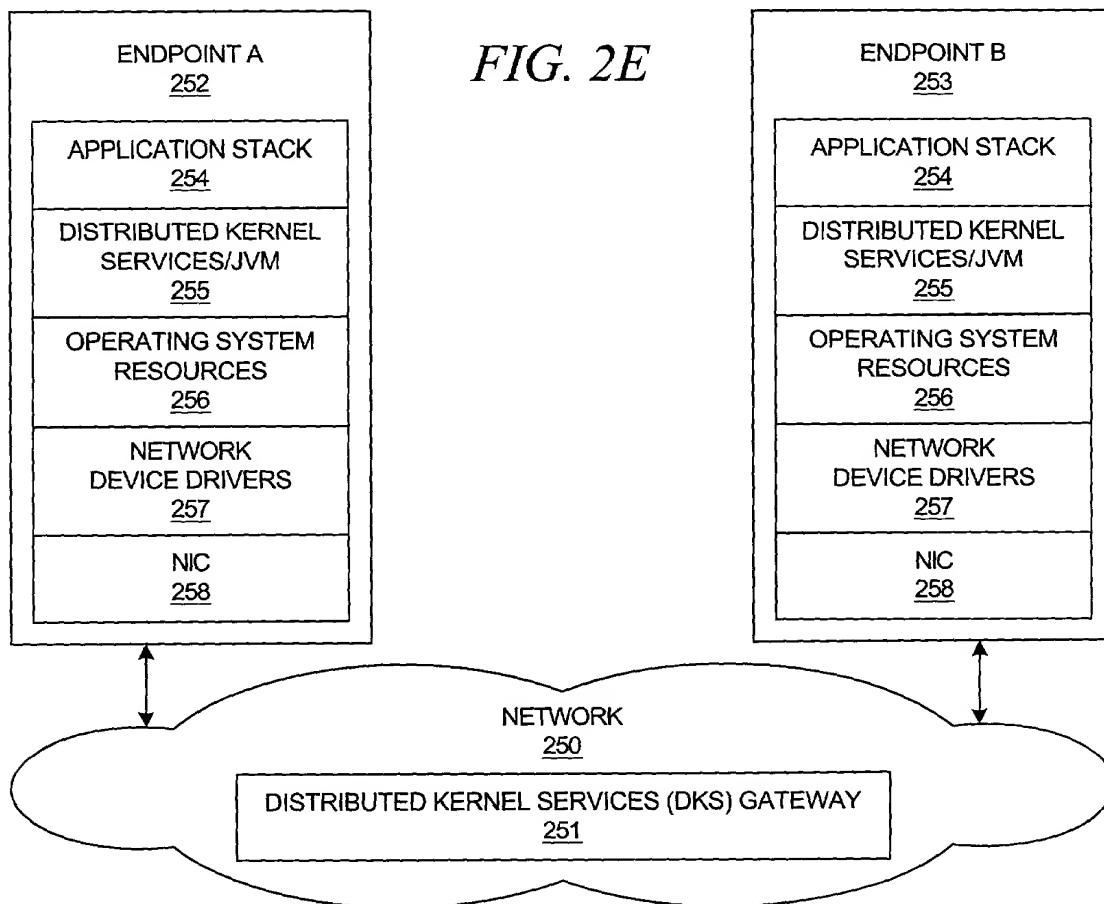


FIG. 2E

FIG. 2D

Method and system for management of logical networks for multiple customers within a network management framework

4/21

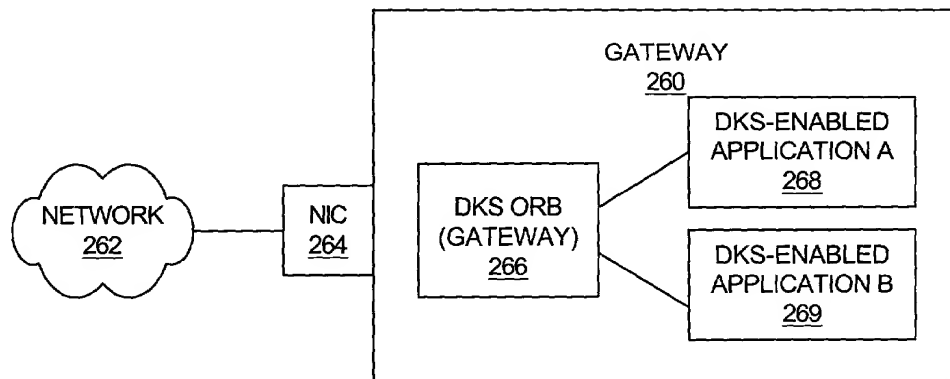


FIG. 2F

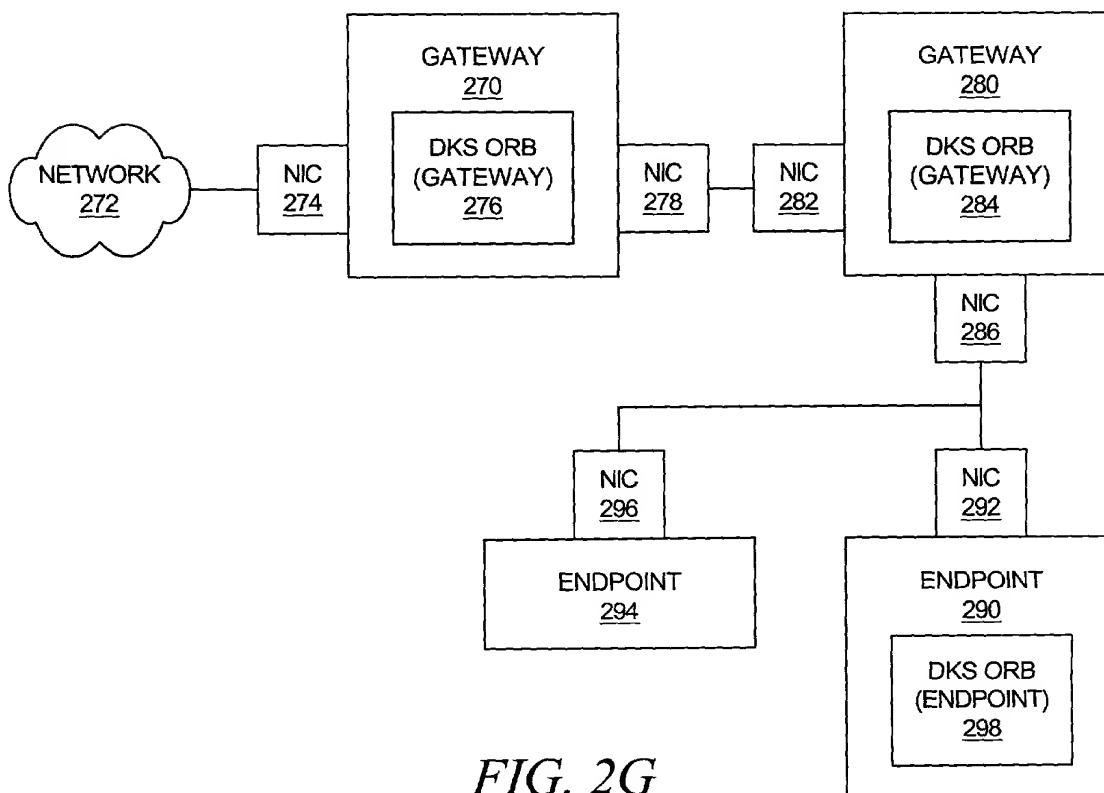


FIG. 2G

Method and system for management of logical networks for multiple customers within a network management framework

5/21

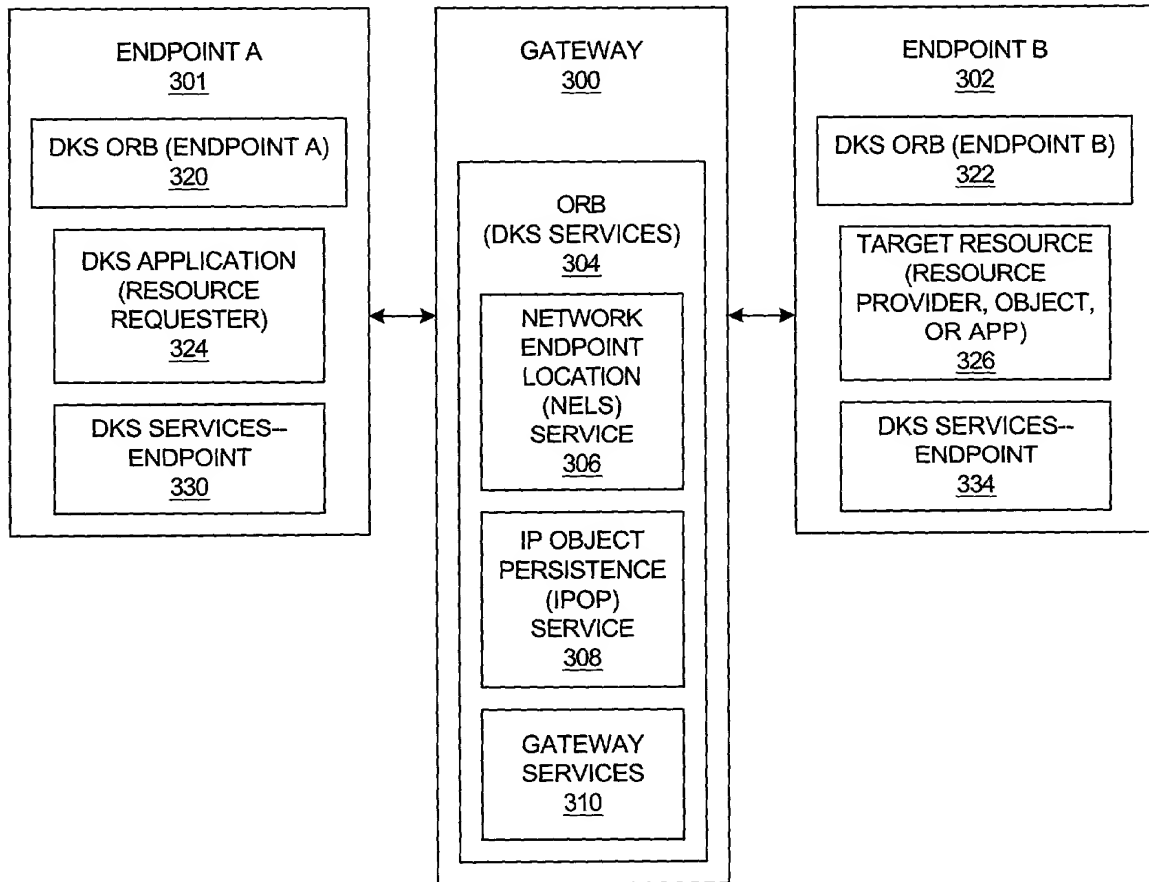


FIG. 3

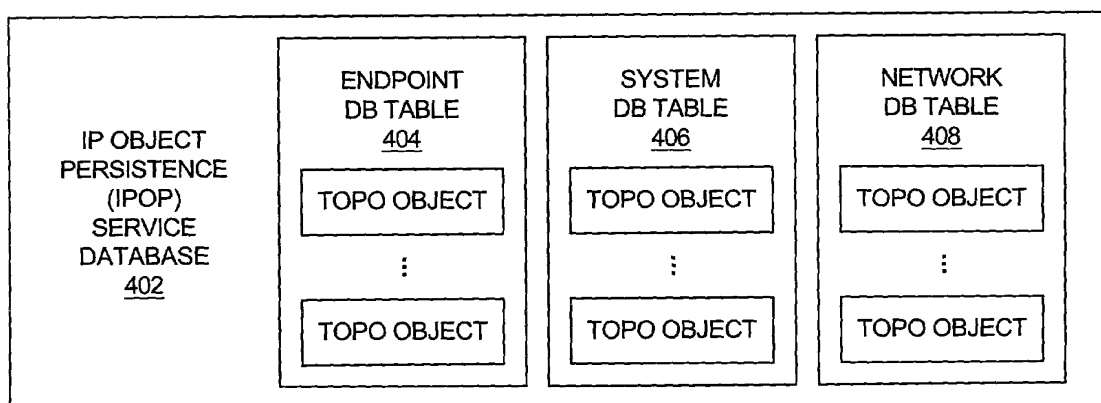
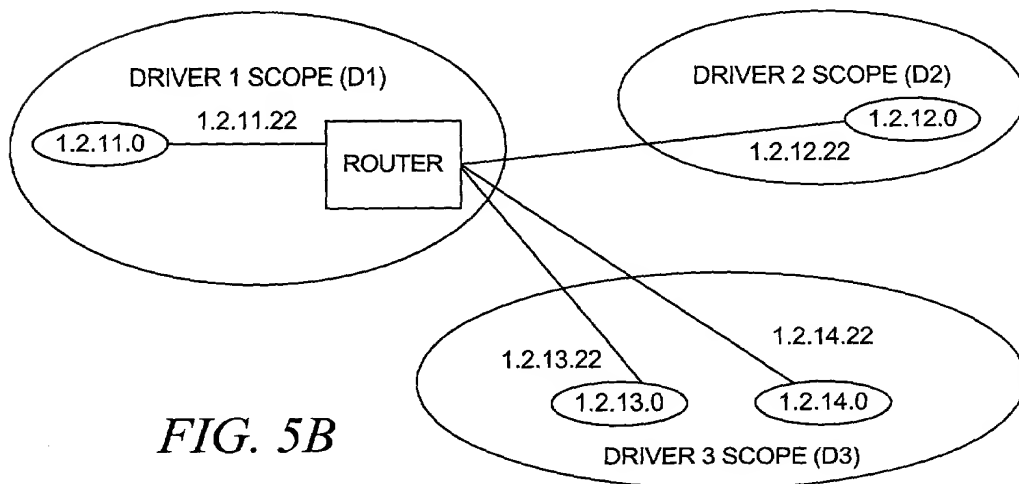
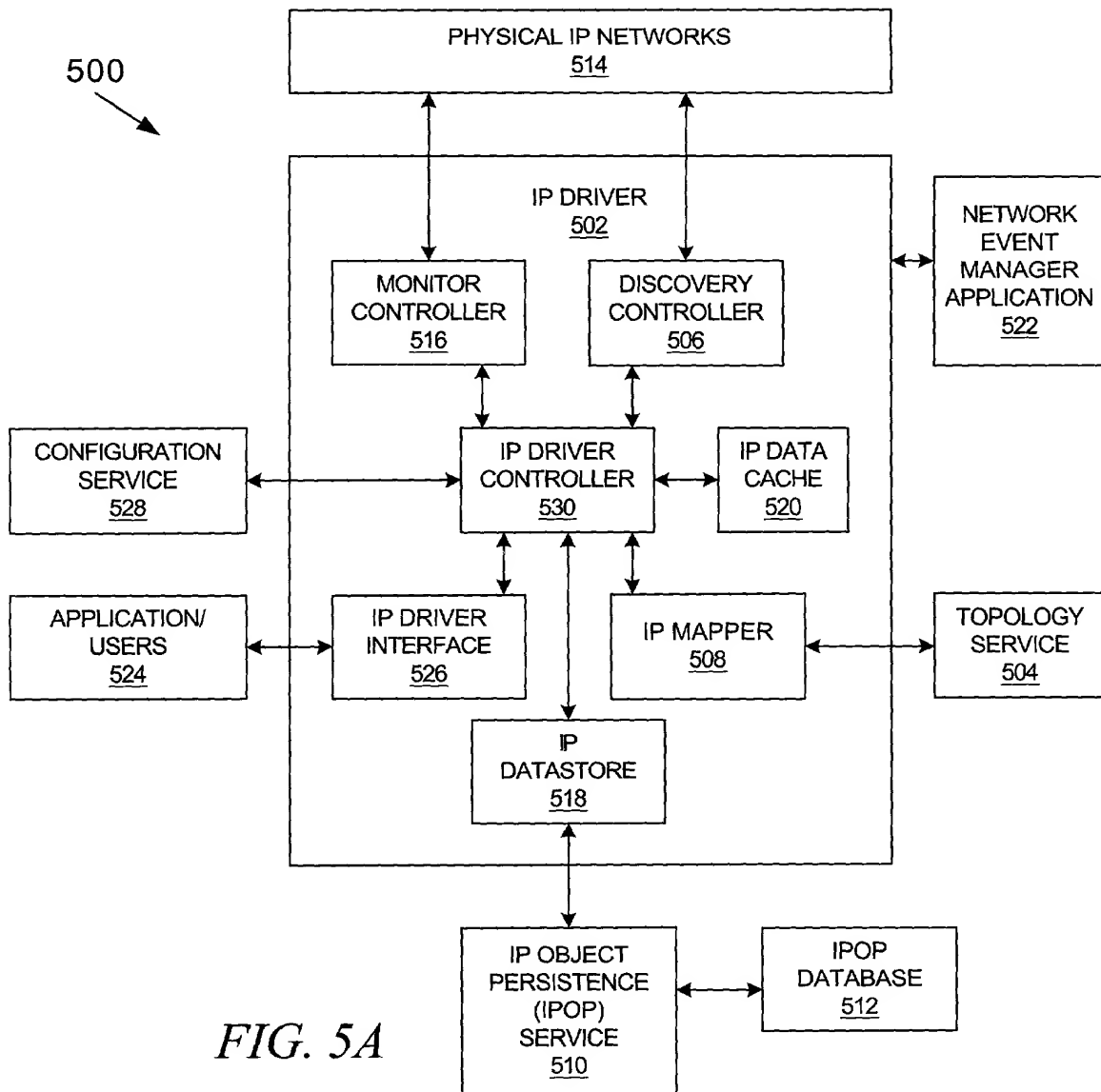


FIG. 4

6/21



7/21

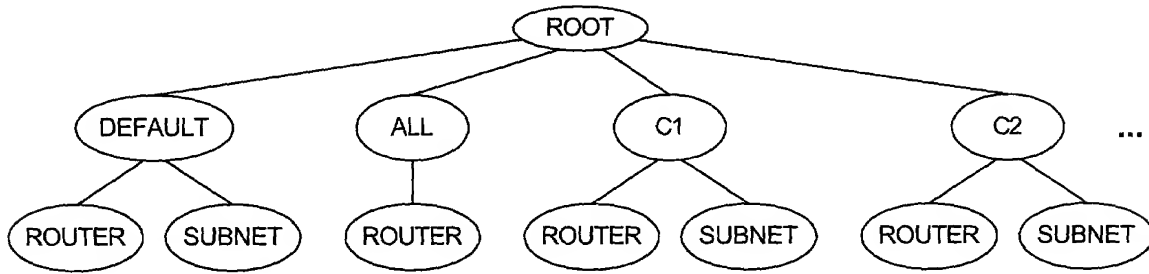


FIG. 5C

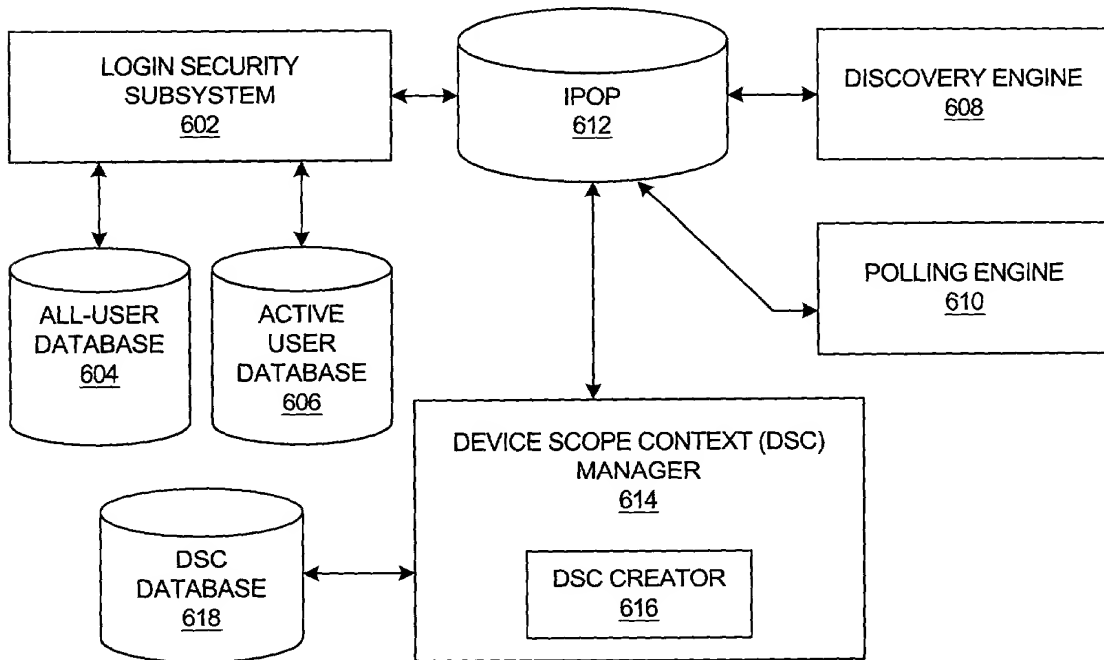


FIG. 6

Method and system for management of logical networks for multiple customers  
within a network management framework

8/21

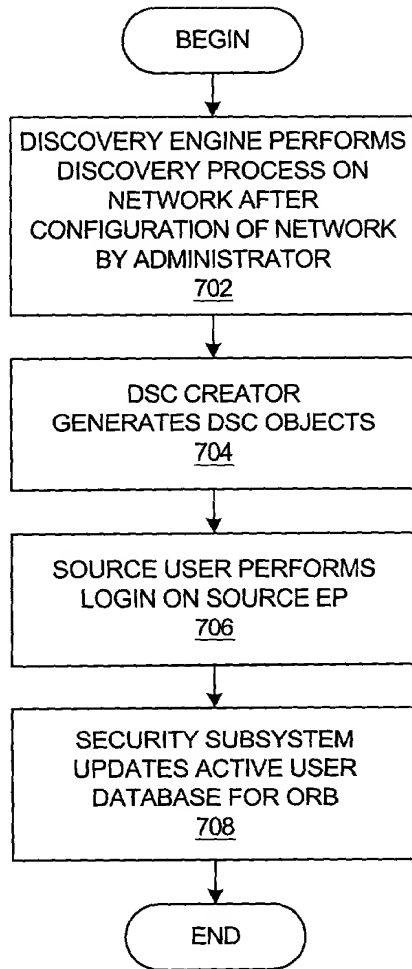


FIG. 7A

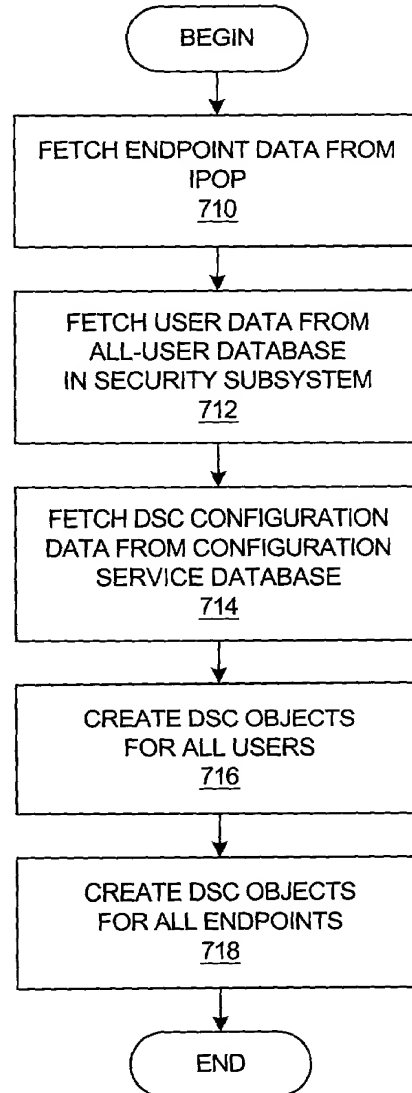


FIG. 7B



Method and system for management of logical networks for multiple customers  
within a network management framework

9/21

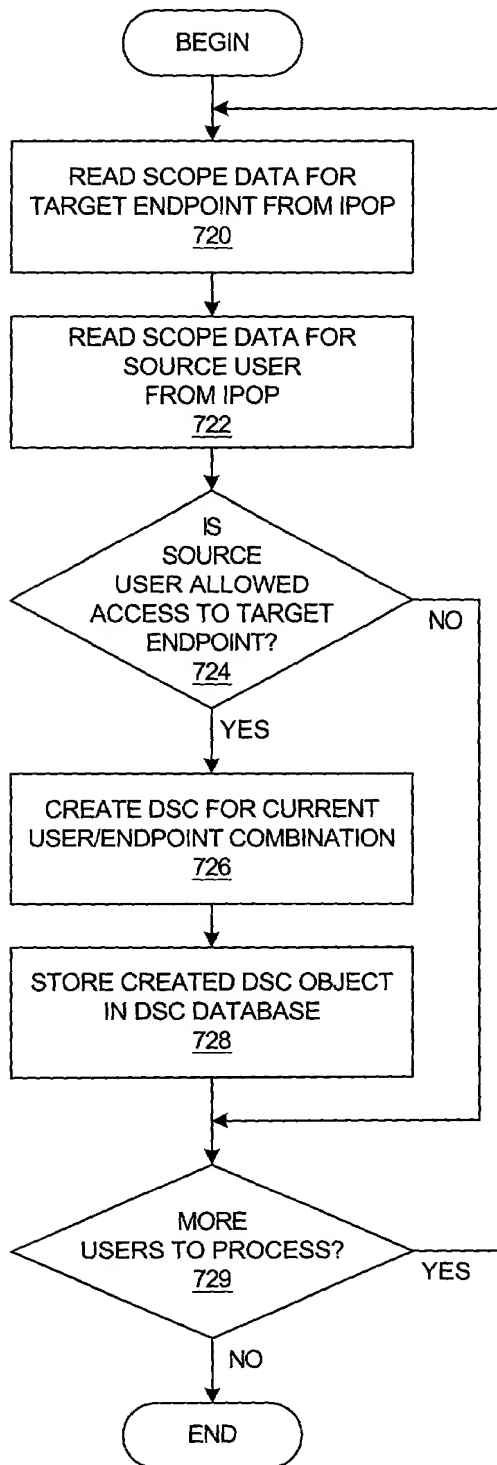


FIG. 7C

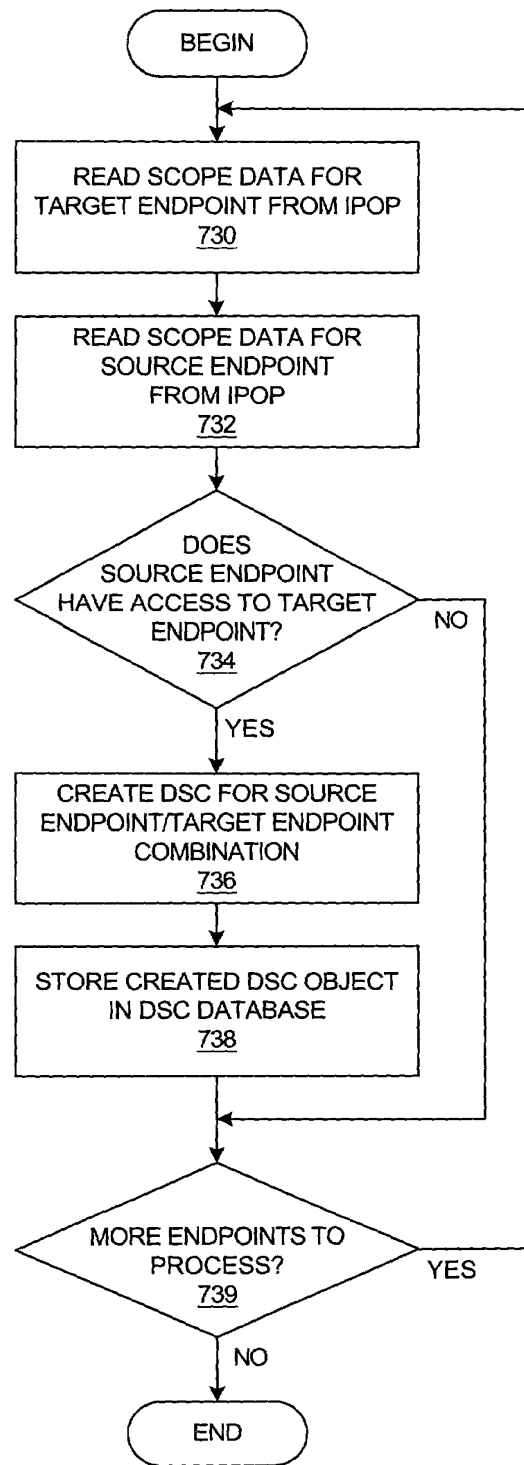


FIG. 7D

Method and system for management of logical networks for multiple customers within a network management framework

10/21

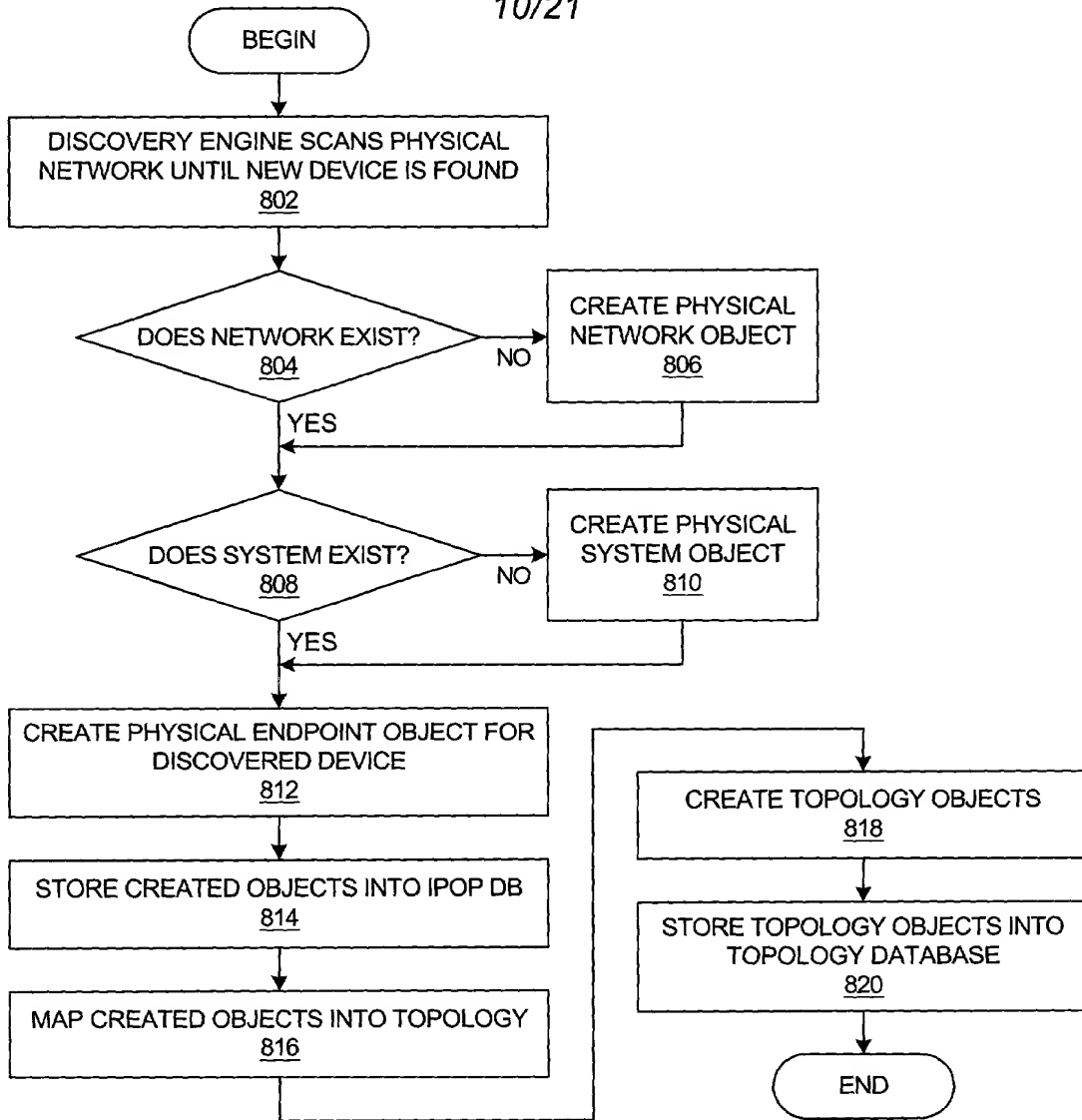


FIG. 8A

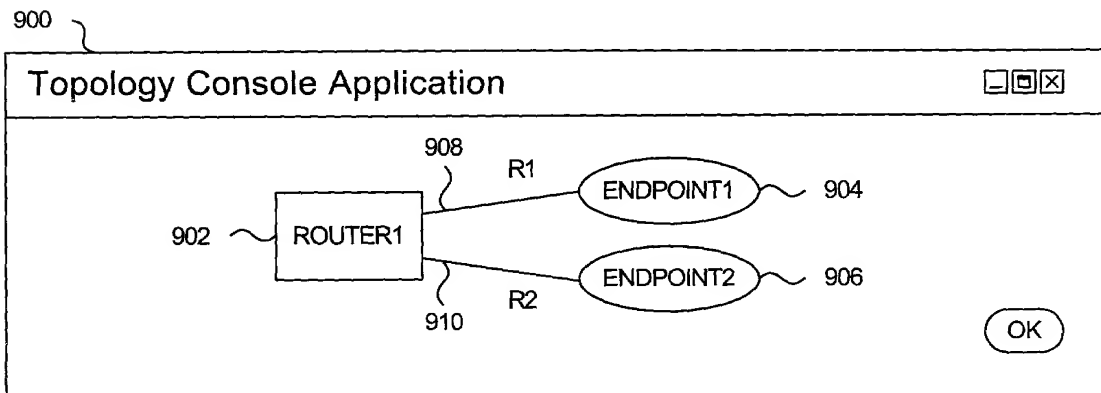


FIG. 9A

11/21

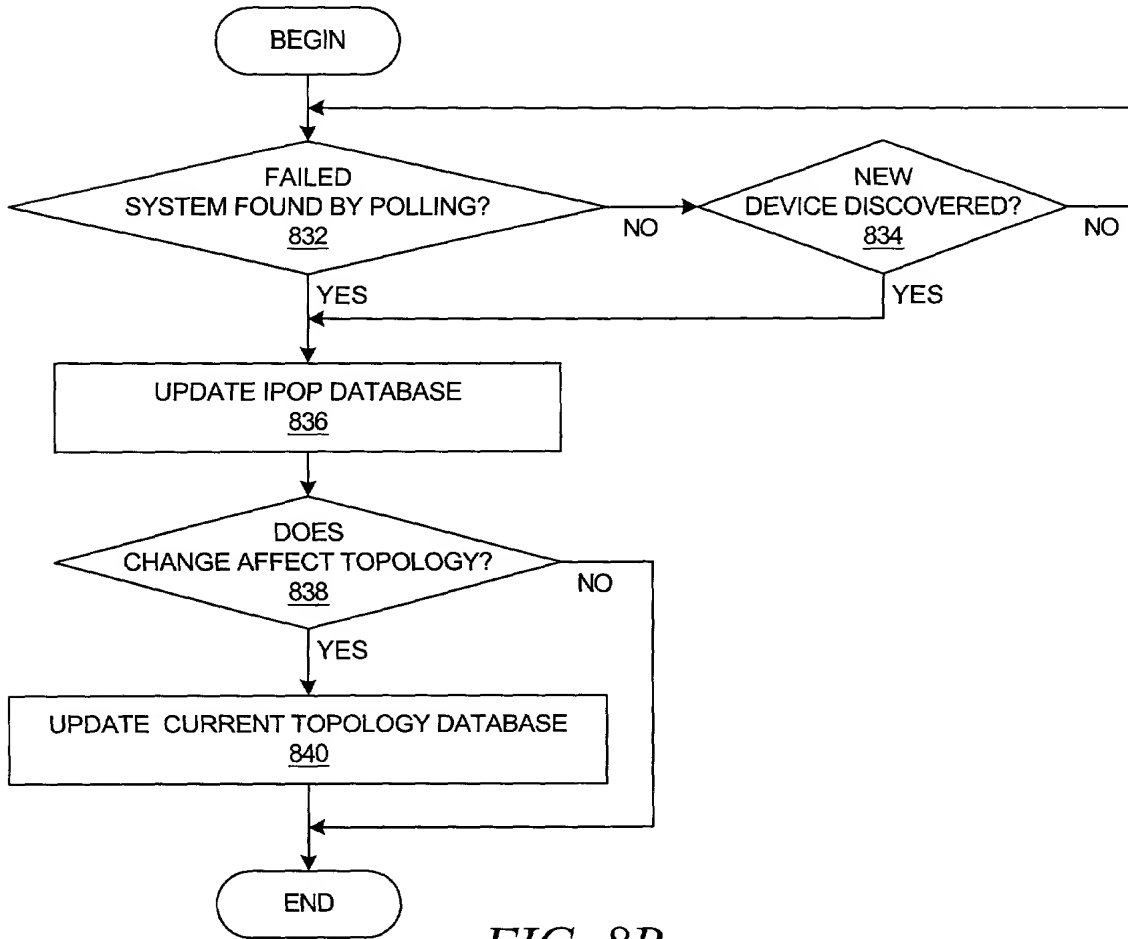


FIG. 8B

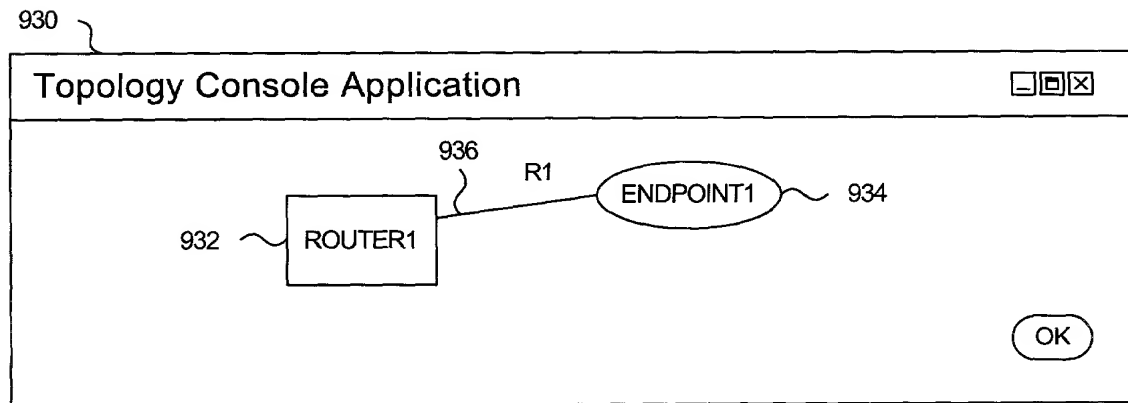


FIG. 9B

Method and system for management of logical networks for multiple customers  
within a network management framework

12/21

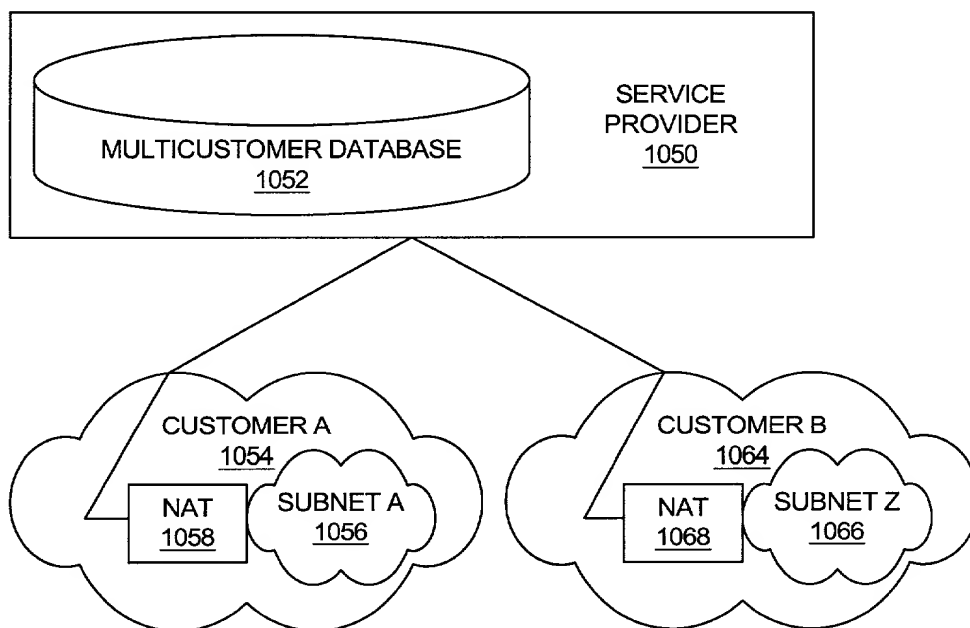
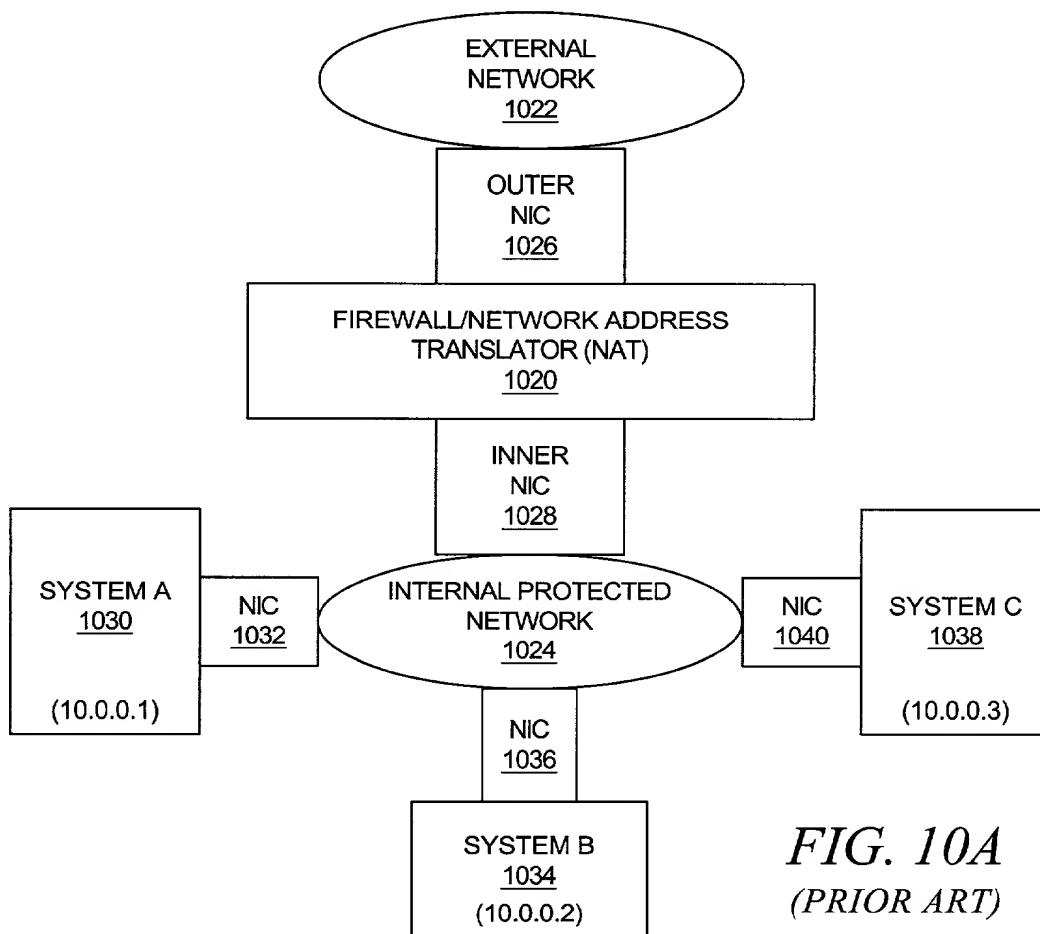


FIG. 10B

13/21

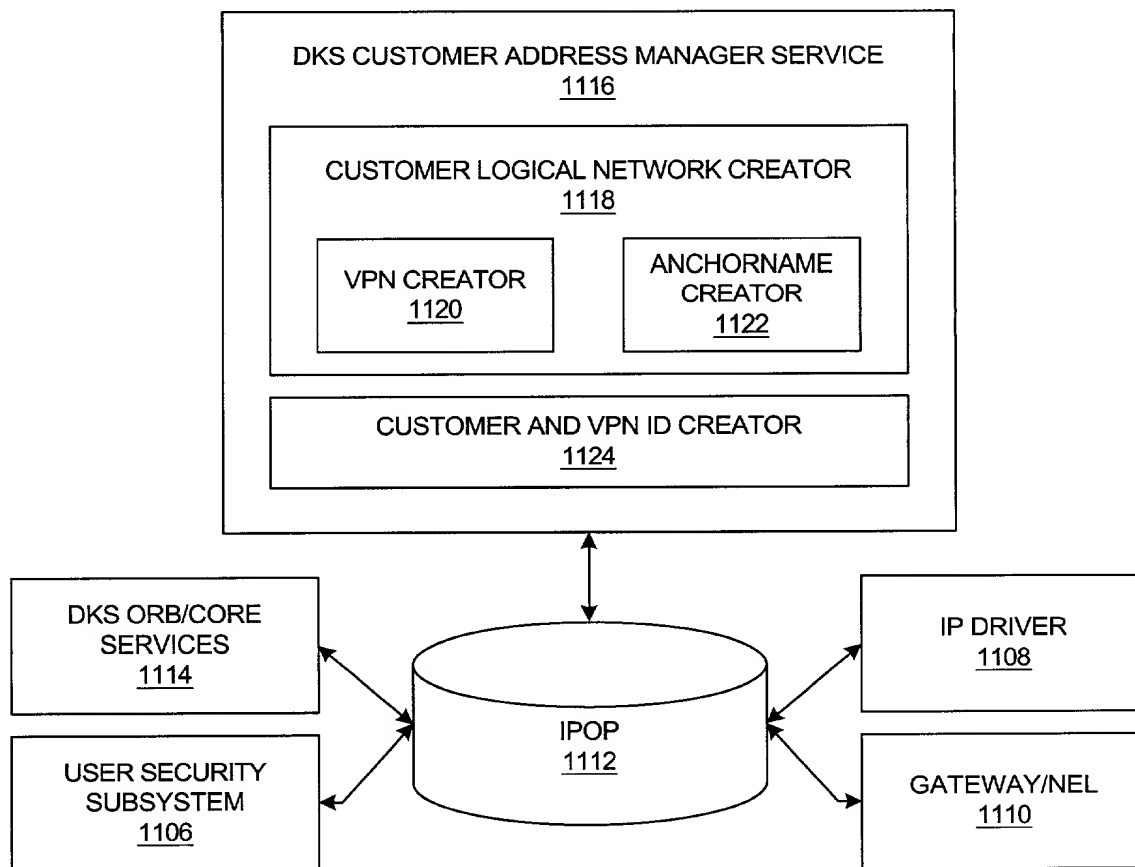


FIG. 11A

1350

Network Management Application

NETWORKS REQUIRING VPN CREATION--DUPLICATE ADDRESSES EXIST

PHYSICAL NETWORK ADDRESS: 10.7.205.103 ~ 1352

CUSTOMER ANCHORNAME: AUSTIN\BLDG1 ~ 1356

VPN ID:  ~ 1370

PHYSICAL NETWORK ADDRESS: 10.7.205.103 ~ 1354

CUSTOMER ANCHORNAME: AUSTIN\BLDG2 ~ 1358

VPN ID:  ~ 1372

1378 ~ ☒ CHANGE VPN ID FOR ENTIRE SCOPE

SET ~ 1374

1376 ~ CLEAR

FIG. 13

**Method and system for management of logical networks for multiple customers  
within a network management framework**

14/21

```

Public Class IPActionObject {

    Endpoint sourceEP;
    Endpoint targetEP;

    // CONSTRUCTOR
    IPActionObject( Endpoint targetEP, Endpoint sourceEP ) {
        .
        .
        .
    }
    VOID performAction( ) // EXECUTES ACTION METHOD
    .
    .
    .
}

```

*FIG. 11B*

```

Public Class Endpoint {

    // public variables
    long   EObjectID; // ID to object (both private and public network addresses)
    InetAddress EIPAddress; // physical network address (private or public)
    long   EPVPN; // virtual private network ID

    //get/set of variables
    public long      getObjectID( ) { ... }
    public InetAddress getPAddress( ) { ... }
    public long      getVPN( ) { ... }

}

```

*FIG. 11C*

```

Public Class EndpointCustomer extends Endpoint {

    public getVPNGW( ) {
        //gets the only gateway which has access to a particular private network
        .
        .
        .
    }
    //private variables only set/accessed by EP creator IPOP
    long   customerHashNumber;
    String customerName;
    String customerAnchorPath;
    Long   objectloFPrivateGatewayRoute

}

```

*FIG. 11D*

Method and system for management of logical networks for multiple customers  
within a network management framework

15/21

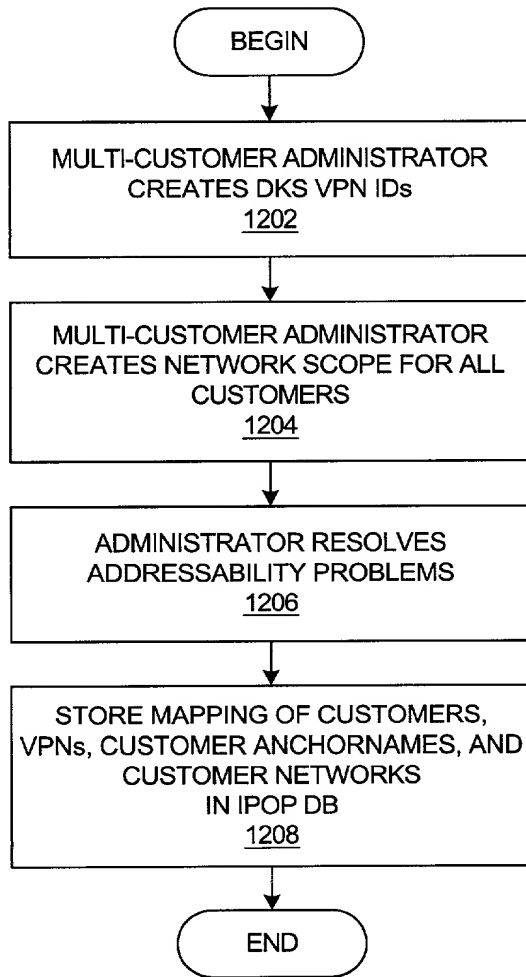


FIG. 12A

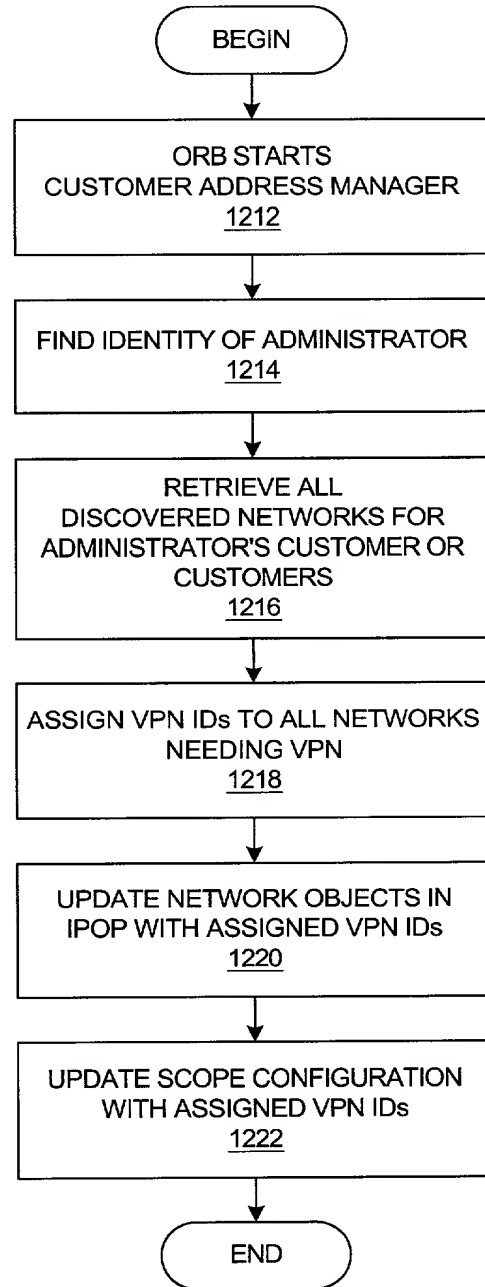


FIG. 12B

Method and system for management of logical networks for multiple customers  
within a network management framework

16/21

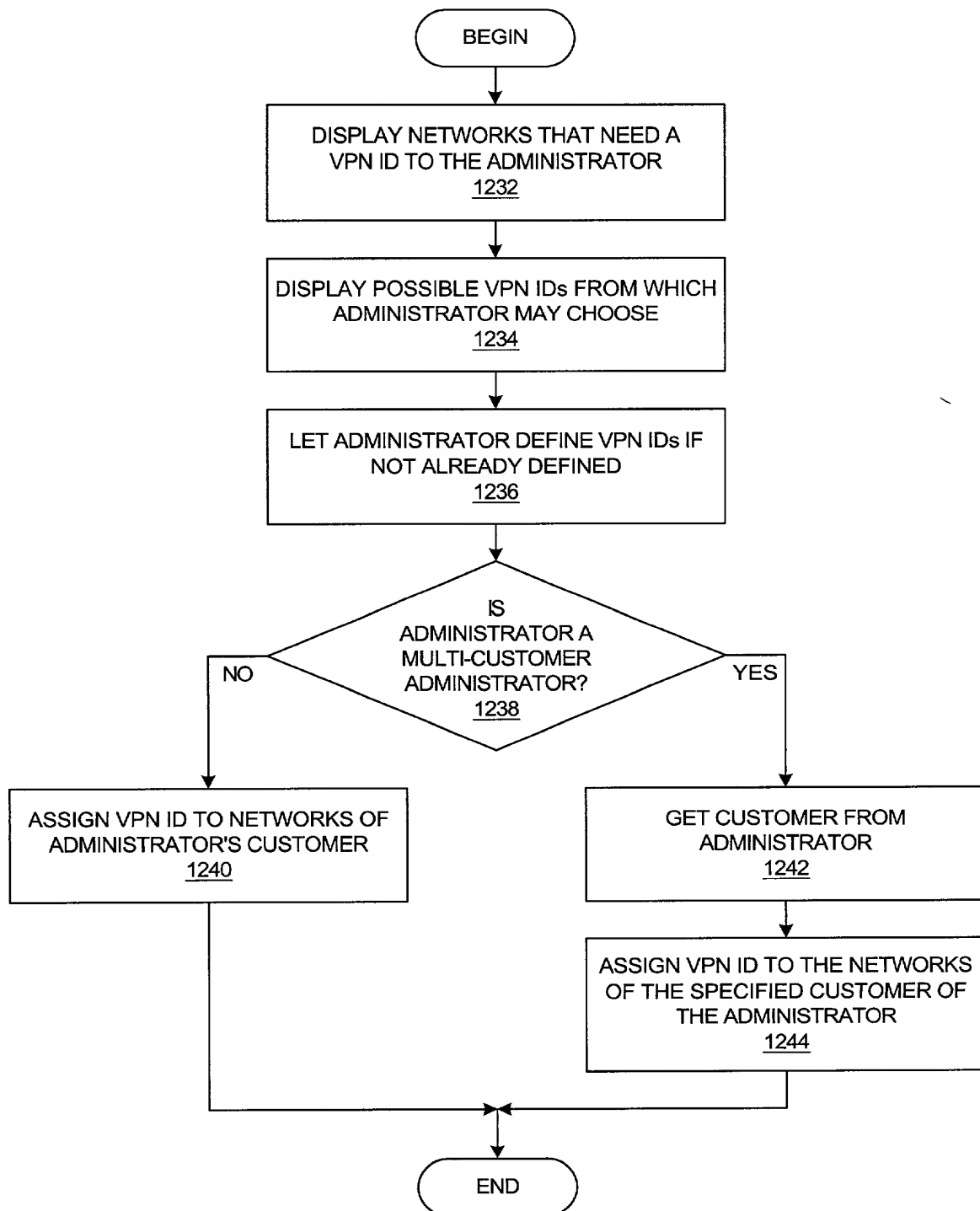
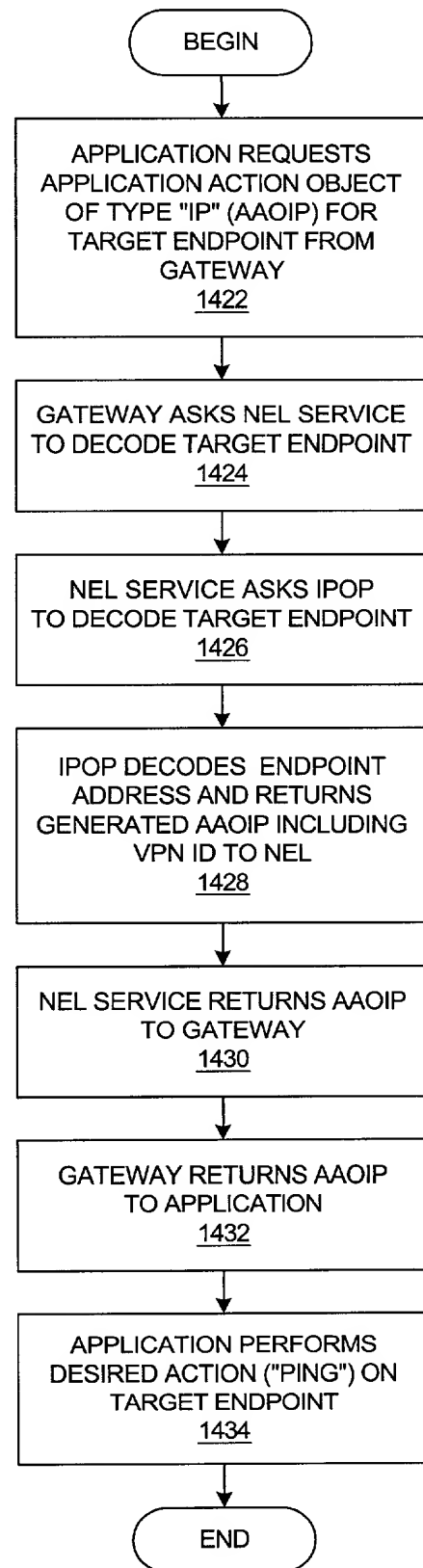
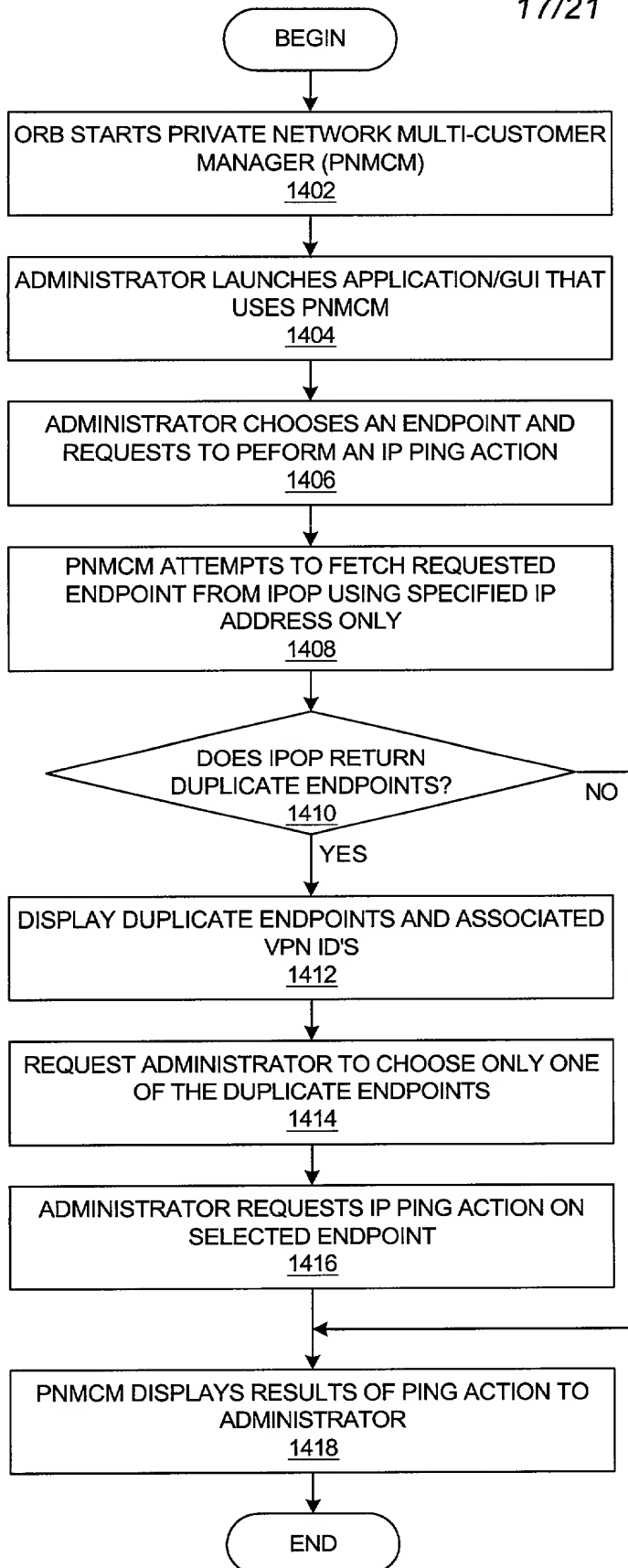


FIG. 12C



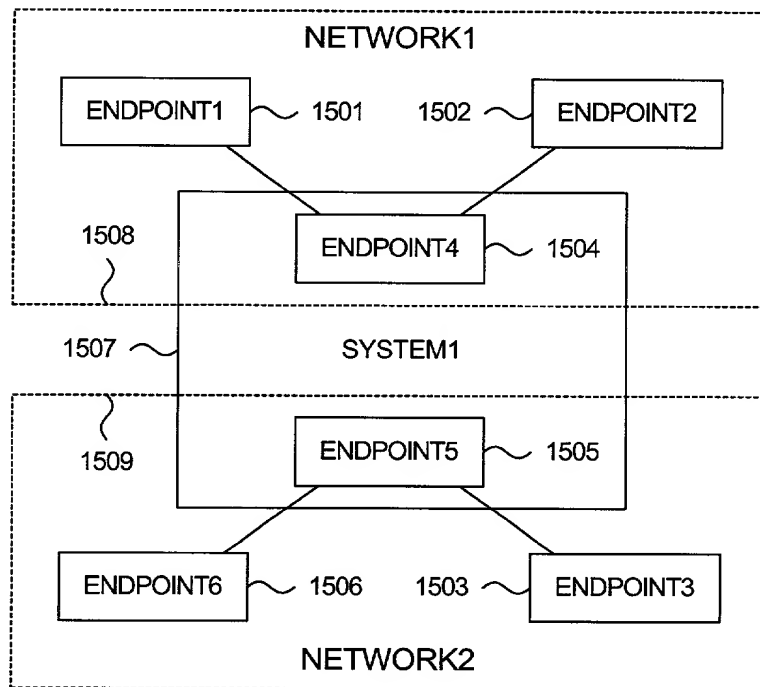
Method and system for management of logical networks for multiple customers  
within a network management framework

17/21



Method and system for management of logical networks for multiple customers  
within a network management framework

18/21

*FIG. 15*

T06250-18050860

Method and system for management of logical networks for multiple customers within a network management framework

19/21

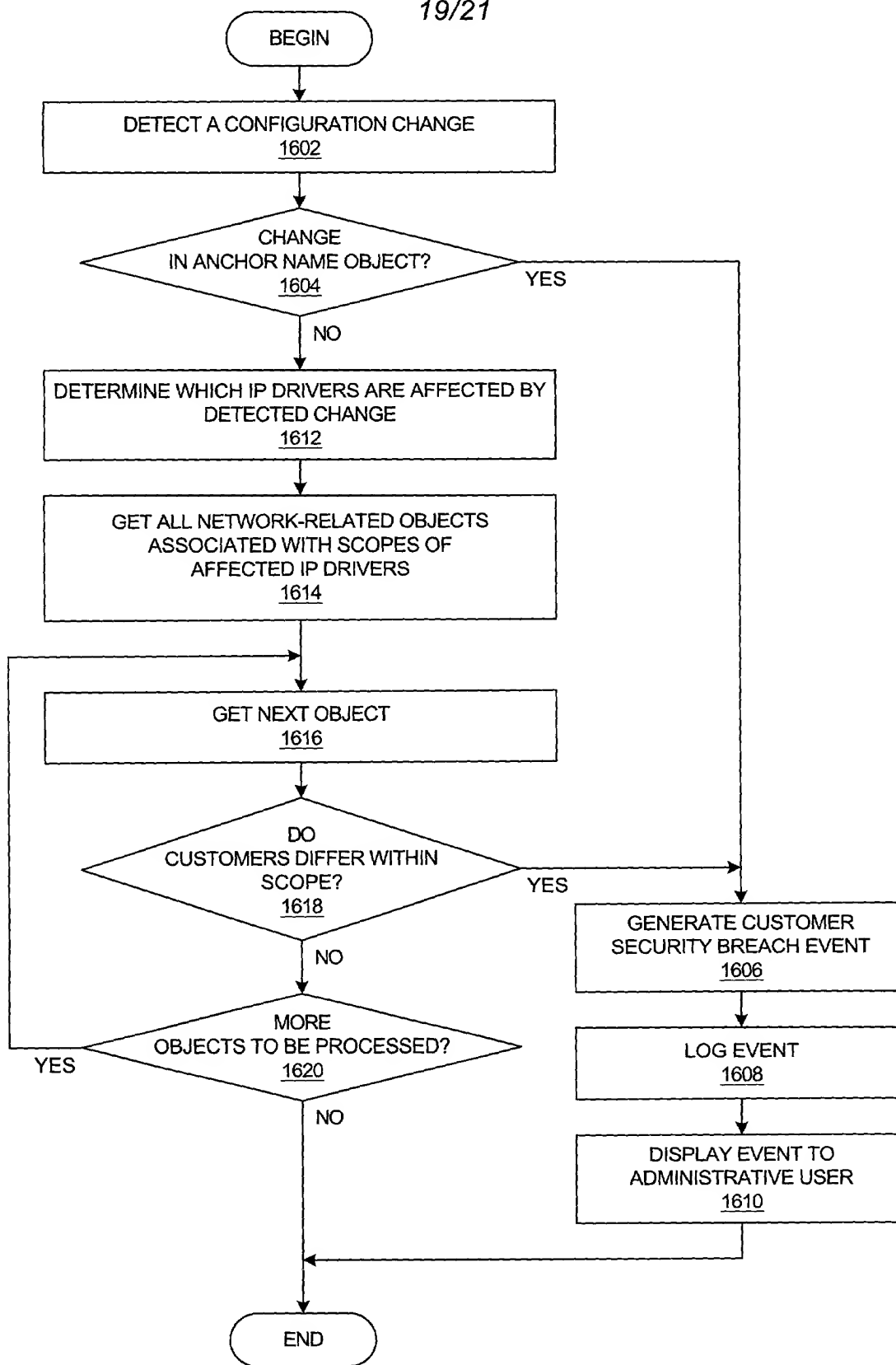


FIG. 16

Method and system for management of logical networks for multiple customers  
within a network management framework

20/21

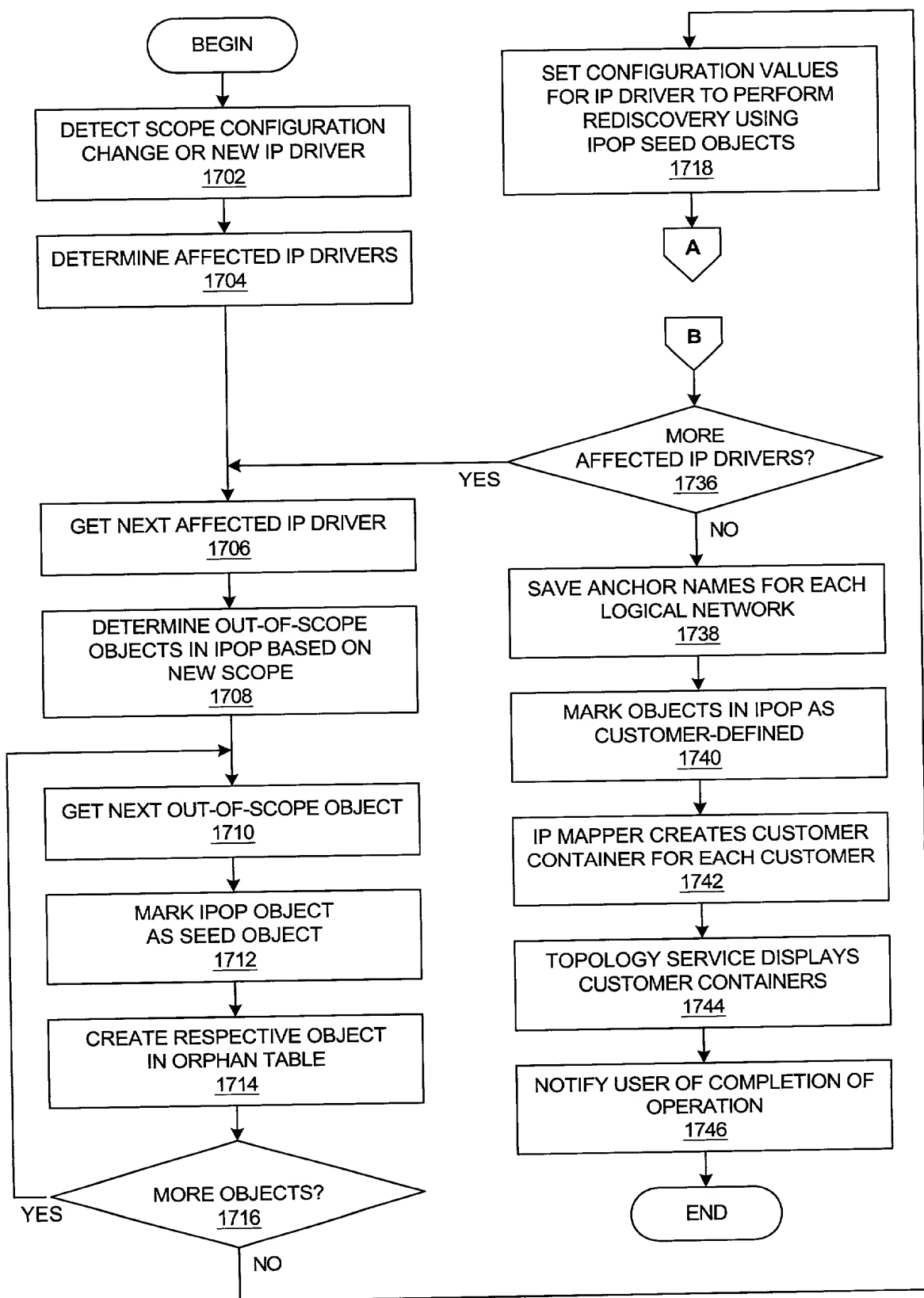


FIG. 17A

Method and system for management of logical networks for multiple customers  
within a network management framework

21/21

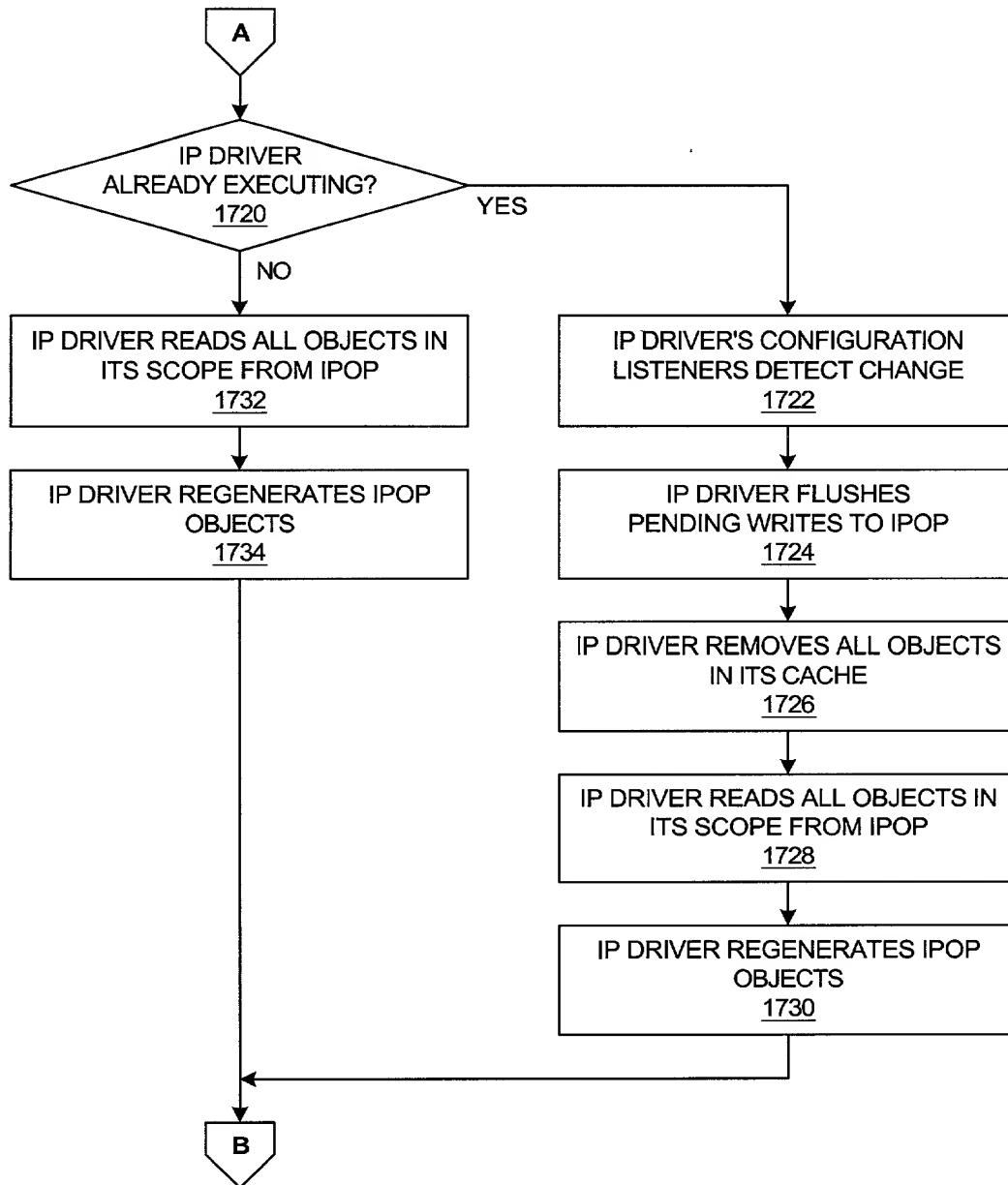


FIG. 17B